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Mother's Way

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An Animated Thesis Production Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Fine Arts in Film and Animation

School of Film and Animation

College of Art and Design

Rochester Institute of Technology

Rochester, NY

November, 2019

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Abstract

Mother's way is my 2D graduate thesis film. The production phase of this film was between September 2018 to August 2019.

This is a film about the sincere feelings between mother and son. The protagonist of this film is an old man who has been estranged from his family for decades. He decides to visit his mother after getting the news that she is seriously ill. During his journey, his misunderstandings between them are eradicated through his mother's diary.

Mother's way is mainly made using the 2D animation software TVPaint. At different stages of production, Adobe Photoshop, Adobe After Effects, Adobe Premiere and Pro Tools were also used. The final output format is 1080P HD with a high-quality stereophonic track.

In this thesis paper, I will describe more details behind the scenes in the chronological order of the whole production phase.

Acknowledgments

I could not have created this film without the generous help of my advisors, family, and friends. I would like to thank my thesis chair advisor Mari Jaye Blanchard. She is not only an amazing teacher, but also a talented and creative artist. I am very appreciative to her for her patience in my entire thesis process. She is always welcoming to new ideas. She always confirmed my goals with me, and then used her rich experience to remind me of possible problems or give me ideas to solve problems. The experience of working with her has been one of the most valuable experiences of my career. Also, I would like to thank my committee member advisors, Kevin Bauer and Hector "Alex" Montoya. They gave me a lot of valuable advice, especially in the pre-production phase. I also owe my thanks to my graduate academic advisor, Tom Gasek, for all of his support during my graduate studies. Since in the absence of one of my committee members in the last semester, I very much appreciate Tom for his willingness to fill in as my committee member and review my thesis paper.

I wish to thank my classmates for their very valuable suggestions and encouragement during my production process. I am particularly grateful to my friend Bingjie Xiao for helping me during the coloring stage.

Finally, I especially wish to thank my family for believing in me and supporting me throughout my time here. They are the theme and source of inspiration for my film. My grandmother was diagnosed with cancer in 2015. When her condition deteriorated in May 2018, I returned to her side from the United States and accompanied her through her last days. She passed away on June 12, 2018. I would like to honor my grandmother, Huiqin Wang, by dedicating this graduation thesis film to her.

Introduction

An old man named John has been estranged from his family for decades. He lives alone on a lake, and his lifelong solitude makes him more and more unsociable. His departure from home thirty-five years ago stemmed from his father's abuse inflicted upon him in childhood. From this tragic experience, in the following decades, he is plagued by nightmares haunting him. In these nightmares, his father turns into a monster chasing him, while his mother always idly stands by and does nothing. He refuses to associate with his mother due to her neglect and indifference to his mistreatment. He ignores the numerous letters sent by his mother, refusing to heed or care for any news about his family.

This continues until the morning of one particular day, he receives a special parcel and another letter from his mother. The package is full of his old toys and comic books. When he sorts out his books in the package, he stumbles upon a diary that used to belong to his mother and it piqued his curiosity. Prompted by the diary, for the first time in many years, he reads a letter from his mother. Through the content of the letter, he finds that his mother is seriously ill and may be about to die soon. After some contemplation, he decides to visit his mother and return the diary to her.

On a whim, he reads the red diary during his travels to his mother. This gives him a chance to get to know his mother's past for the first time. As he reads, the window into his mother's memories seem to manifest in reality, appearing alongside him on his journey. More importantly, he is able to discover for the first time from his mother's perspective the truth about the abuse that led him to leave home decades ago. He had thought that his mother did not have any interest in helping to him when he was being threatened by his father, but the truth couldn't

have been more different. He was unaware all this time that his mother bravely stepped between him and his abusive father. This was a fact that escaped his notice because he ran away from the abuse, and subsequently refused to contact his parents, which led to this tragic misunderstanding.

When he knows the whole truth of this through his mother's diary, his heart is full of shock, shame, and regret. In the wake of his emotions, he rushes to his mother's apartment. When he finally sits by his mother's bed, and feeling ashamed of his misjudgment, he bows his head wondering if his mother would forgive him. Fortunately, when his eyes meet his mother's gaze, he knows that his mother never blamed him all these years. They are finally reunited, with two kindred hearts full of love and understanding.

Inspiration of *Mother's Way*

In the initial brainstorming stage, I made four ideas for my thesis film:

1. "Parking lot party night" A story about what happens if the car parked in the parking lot at midnight has its own personality.
2. "Space pirate" A twisted story about a pirate's plan to plunder an uncivilized planet of hostile aboriginals, but in the end, he becomes the prey.
3. "Young gangs in the city" is a film idea that focuses on action and visual elements. It's a story of several youth gangs gaining power in a rioting city.
4. "Family story" This was a rough idea that I wanted to tell of a story that happened among family members, although the plot is not defined.

The first two ideas were more inclined towards physical comedy or cartoony style. The idea of “Young gangs in city” paid more attention to the visual elements. In my imagination, it would be a film with a cyberpunk theme. The idea about "family" was different from the first three. I didn't have specific story beats or a treatment at the time, yet it's a topic that I had wanted to try to express over the years.

In 2017, the Pixar movie “Coco” won great success worldwide. It also gave me a lot of inspiration during my research phase. When I was reading *The Art of Coco*, the director, Lee Unkrich, described the inspiration of the film: “I'm convinced that the most powerful stories must come from someplace personal. The more universal the idea, the more likely it will resonate with people around the world.” (Unkrich 4) When Pixar combined the family theme with the traditional Mexican festival “Day of the Dead” (Dia de los Muertos), the prototype idea of Coco was conceived.

It was this influence that made me realize that I wanted my film to meet two requirements. The first point was that it should convey a universal idea. Secondly, I hoped to tell as story in my film that held great significance to me personally. Therefore, on this basis, I vetoed the first three ideas. They were basically gag-based comedies or generic stories of fiction and imagination. While there is merit in these ideas, I did not feel these concepts touched upon the most important themes to my life and expression as an artist.

On the other hand, “family” is probably one of the most universal topics in the world. We all come from families, no matter big or small. We all have our own memories of our family members. Therefore, I was very happy with this concept since there are no cultural barriers for audiences despite different backgrounds. For this reason, and for it's personal significance to my life, I finally chose the theme of "family" to develop as the basis of my thesis film.

After determining the theme of "family", I started looking for my own connection to this theme. So, it all came back to my memories of my family members. I lived in a relatively traditional and conservative Chinese family. The elders always have an authoritative status in the family. For example, the person who has the closest relationship with me in life is my mother. However, we never had a chance to talk about her past seriously. I barely knew anything about what kind of person she was in society or in the eyes of others. What I was familiar with was her identity as "my mother". As a son's perspective, I often forget that she was also a wife, a nurse, and a friend.

Another memory that has had a great impact on me, and directly led me to make this film, was of my grandma. A few years ago, I went to my grandmother's house to visit her. When we were chatting, my grandmother showed me an old diary from her youth. Written in the 1940s, the diary contained a detailed record of the daily life of my grandmother as a teenager. The things she wrote in the diary shocked me, and for the first time, I felt so close to the history I had read only in textbooks.

These two memories made me realize that my understanding of my family members is not quite what I imagined; there was so much I just didn't know. For me, I often felt dread from this ignorance. I was afraid that when they finally pass on, all of their stories will leave with them. I felt a responsibility to inherit the history and stories of my elder family members.

So, I decided to mix my mother and my grandma into one character. At this stage, the prototype of my story was about a son who had been separated from his mother for many years eventually eliminating misunderstandings, realizing the truth about the mother and returning to her side on his mother's journey. This film would be my tribute to my family and it would also express my perspective on them.

Pre-production stage

Script Development

Original Story Structure

In the original version of the script (August 2019), there were two protagonists: The male character was named John, and he started his journey from his house to his mother's apartment in the beginning of the story. Another protagonist was a female character, the mother of John wearing a red scarf. Both protagonists would each show different ages and appearances in stages as the story progressed.

In the story, John left his mother when he was a child, and they never saw each other again in the next few decades. So, John's memory of his mother stayed fixed for decades on. The images of all the red-scarfed female characters in the film were the specter of John's imagination produced as he read his mother's diary. As John gets closer to his mother's apartment, his appearance gets younger and younger, while the image of the red scarf female gets older with the diary. When John finally met his mother, they had reverted to their ages from when they left each other.

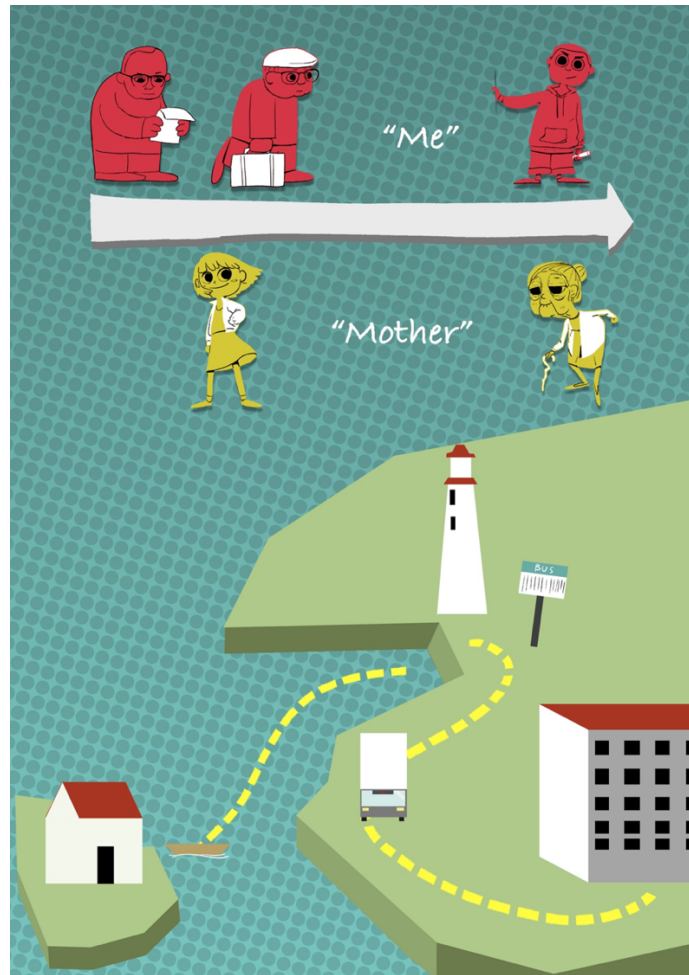


Fig 1. Original timeline setting

The opposite timeline of the two characters symbolized that their reunion after many years is not only in the real and psychical sense but also as a process of mutual understanding between their souls.

For this relatively complicated narrative structure, I predicted some problems that might arise during my production. For example, to maintain the continuity of the character's appearance, I had to give the character an easily recognizable feature that would be consistent for all of their ages. I at first thought of a visual tool to accomplish this: in the original plot, I used a harmonica as an important prop to link the story. The harmonica was given to the protagonist as a gift from his mom when he was very young, and it was the only thing he took when he left

home. The story ended with John returning to his mother and playing a song for her on the harmonica.

However, in the pre-production process, the complex narrative structure still led to many unexpected problems. Many people had been confused about the different appearances of characters after seeing my thumbnail. In some sequences, the protagonists would appear as different ages, but some viewers thought they were simply two irrelevant background characters. In some shots, when the two protagonists appear at the same time with similar ages and appearance, some audiences read their relationship as a couple or even siblings.

Improvement of the script (Early September)

In response to these problems in the story visualization process, my advisor, Professor Blanchard, and I sat down and reviewed the story structure together.

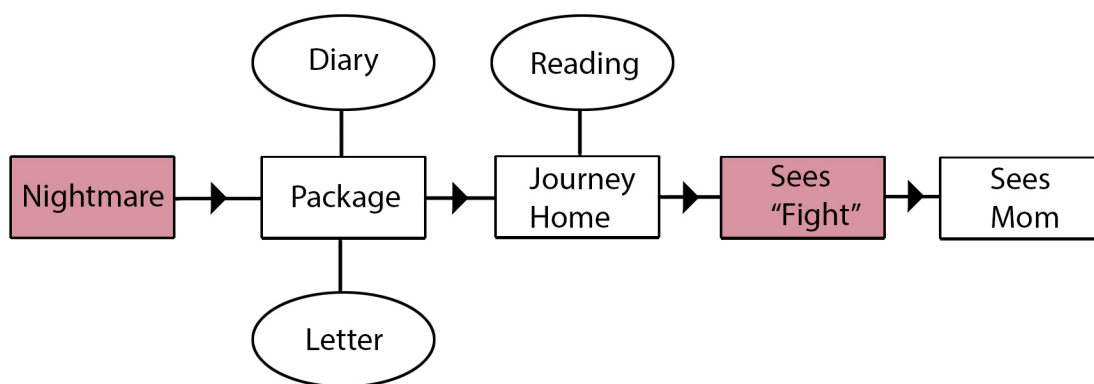


Fig.2 Narrative timeline

I wrote the story so the camera would mainly focus on John, so that my audience could experience his perspective and empathize with him easily. In the refined storyline, as the narrator progresses, the audience would take part in the experience of solving the puzzle together with the

protagonist of the story. Since I wanted to keep the audience following "John's journey", I had to cut down some actions of the mother character. For example, I cut the scene of the mother mourning her dead husband at the cemetery to avoid audience confusion and distracting questions like "Who is she mourning for?" "How did her husband die?" or "Does John know that his father has passed away?" Instead of answering these questions directly, I tried to address such details through visual hints in the environment.

The phantom character with the red scarf that accompanies John's reading still appears at different ages in different scenes, but John's appearance no longer changes with his journey, as he maintains the appearance of around fifty years old. This was done to keep him more strictly tied to reality in the timeline, to distinguish it from the illusory timeline that the red-scarfed woman inhabits.

Another change was that in the pre-production process, the harmonica was a prop to link John and his mother, but the significance of its existence was increasingly misinterpreted. It was often difficult for audiences to notice the presence of the harmonica. As a result, I gradually reduced the showing of the harmonica in each revision of the storyboard. At the suggestion of my advisor, I completely removed the appearance of the harmonica in the story. Instead, I chose to use a red cover on the diary as a symbol to connect John and his mother. I made John return the diary to his mother at the end of the story, which not only clarified the motives for his journey (to return the diary to his mother) but also determined that the writings in the diary were of his mother's life. This change made my shots more efficient and clear.

In order to clearly express the mother-son relationship between "the red scarf woman" and John, and avoid misunderstandings in audience, I wrote a scene of John's nightmare as an intro part of the film. The nightmare that haunted John for decades, the content of which is the

abuse that led him to run away many years ago. By comparing this nightmare sequence with the truth described in the diary shown at the film's climax, the audience could more easily understand it is the same event, but from two different perspectives.



Fig.4 Ending scene of *The Straight Story*

For the end of the film, I felt drawn to emulate the storytelling pace of David Lynch's *the Straight Story*, a biographical road drama film about an old man who makes a long journey by lawnmower to mend his relationship with an ill brother. This film ends with the brothers staring at each other face to face without sentimental dialogue. I thought it's a warm moment, with a bare and sincere interaction full of sentiment. With this in mind, I decided to make use of this calm, sentimental ending. The reunion of John and his mother, with no need for words, nor tears, has only a warm smile, and clasped hands so that the audience knows that after several decades, their hearts finally joined together in understanding.

The modification of the script was a process that lasted for several weeks and ran through the entire pre-production phase. In general, this process was not only a process of constantly

answering questions, constantly negotiating between “what I want to say” and “what I should say”, but more importantly, it was also a process of constantly refining the core of the story. After every change, I had to listen to the feedback from the audience to make sure I was on the right track. At the same time, the script’s modification was aimed to make full preparation for the next step of visualization. Once the story had reached a certain level of completion, I would use design to enhance my theme more efficiently.

Visual Development and Influences

Style and Aesthetic



Fig.5 Illustration examples

In terms of aesthetic style, I chose a popular illustration style of recent years as the most important visual feature of the film. This style includes the limited color palette options, strong use of light and shadow in the composition, exaggerating contrast, and clean consistent linework. It also uses more realistic representations in the shape of objects and the environment than in the

use of color. In the production stage, this style also contributed to the efficiency of my coloring process.

Color Palette



Fig.6 Color palette of shots

For the choice of color palette, I paid more attention to maintaining the affinity of the tones. In general, the color tone changes gradually as the story progresses and it presents two advantages: a symbolic progression of the story (as the character travels from his house to his mother's apartment, the general tones change from cold to warm), and also a chronological progression in the story, starting in early morning when John left his home and ending as he

arrives at his mother's apartment in twilight. In correspondence with this, the tonal contrast progresses through a high-low-high sequence.

In each individual scene, I used high-contrast light and shadow to build better composition and depth of stage while maintaining most affinity of tones. This helped attract the audience's attention to the character's acting. Also, when the background color palette remains highly consistent, it can better show the emotional atmosphere of the scene.

Environment Design

I didn't have strict restrictions on where the story takes place. Of course, this is a story of a "Chinese-culture family" based on my experience. But I didn't want to add too many traditional Chinese cultural symbols to interfere with the audience's perception of the story itself. The effect I hoped to achieve is that the audience can be connected to the story through their own experience no matter where they're come from.



Fig.7 Boat house near Cayuga lake, NY

The house where John lives alone is a boat-house built on the shore of a small island. Living on an island relatively isolated from the city symbolizes the solitary and unsociable character of John. This house can also be seen as a hidden place for him to escape the past.

The visual reference for the boathouse came from the common lake houses along the shore of the Finger Lakes. They usually contain a garage in the boathouse that can park and store all kinds of boats. I found them very interesting and unique, and symbolically relevant for the design of John's house.



Fig.8 Comparison of reference photos and film screenshot

The mother's apartment is based on a location in downtown Rochester. John's journey to her apartment requires a boat, then a bus, and finally a taxi. For these vehicles, I chose to reference common styles from around my living area. The exterior of the city was drawn from the downtown of New York City, especially the old Chinatown area, because I wanted to create a scene that is crowded but full of people who are indifferent to each other.

The interior of the mother's apartment came from my impression of my grandmother's home. I drew a lot of props that often appear in the old houses of the elderly, such as many photos, vintage calendars, and potted plants. It was an old but warm feeling; perhaps a bit cluttered but full of nostalgia.

Character Design

“John”

Due to the changes in the treatment, I no longer needed to draw designs for all ages of John. There were now only two Johns: The 50-year-old John that appears as the protagonist, and the young John who appears in the abuse flashback.



Fig.9 John's character sketch

During the initial character design phase, when I was creating various sketches for John's appearance, my advisor asked me a very important question: if the background of the story comes from my experience, why did the main character look like a white person? This question

not only reminded me that the appearance of the character should be unified with the story's background, but also made me pay attention to the consistency of visual symbols in other areas. So, after the few versions adjustments, I gradually transitioned away from the facial features of John that were too western-like toward a more Asian visage.

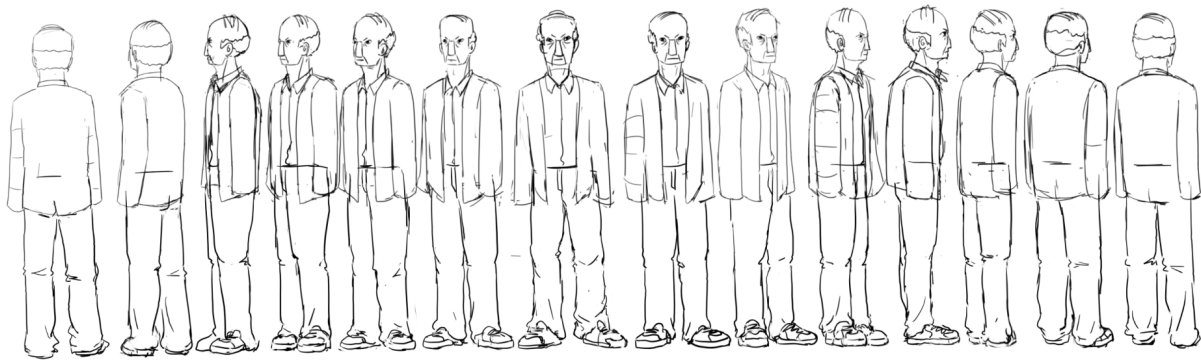


Fig.10 John's turnaround

I used a rectangle as the basic shape of John, and his face line represents this well as the wrinkles are sharp and angular. The ideal interpretation by the audience would be to read him as a grumpy and serious character with these stern, blocky features. For the age representation of John, out of concern that the audience might mistakenly think he is the same age as his mother upon their reunion, I chose to design him as partially bald, but still having dark hair and an only slightly hunched posture. With this, he appears aged, but not completely elderly like his mother.

The two character designs of John at different ages have recurring facial features that such as a rectangular nose and chin that help serve as visual cues for the audience. With such an extreme age difference, making the two designs resemble one another was difficult, so I also relied on the blue color of their clothing to help connect the two.

“John’s Mother”



Fig. 11 “Mother” head turnaround

The "mother" character would appear in four different ages. The ages included are: as a child (around 5-years-old), a girl(18-years-old), a bride and young mother (late twenties), and in old age (around 75-years-old). In order to maintain the continuity of this character, I chose to use the red scarf as a visual symbol for the mother. At the different ages, mother also wore the scarf in different ways.

“People”

All people except the main character had a simplified and unified appearance. They didn't have pupils and don't show any expressions on their face. Their coloring was typically blocks of cold, grey-blue that suggests the indifference of the crowd. At the same time, the monochrome color of the crowd makes them more consistent with the background because they are merely background characters most of the time. In John's nightmare, they turn into a distorted creature with a single eye blocking him in a wall of bodies.

Sound Design

This film contained no dialogue throughout. I had briefly considered adding dialogue to help the audience better understand the story with more explicit explanation. For example, if letter at the beginning could be read aloud by John, the audience would immediately understand the situation that his mother is seriously ill, and thus understand the motivation for John to embark on his journey. When I discussed this idea about dialogue with my advisor, I thought that if there is a dialogue in this film, I felt strongly that it should be in Chinese. This means that I would need to provide subtitles for the English based audience. I thought this may further distract the audience, and that I could sufficiently tell my story through the visual presentation, so I decided to forgo dialogue altogether.

The only place where the character's voice appears in the whole film is in the nightmare of John. He shouts "Mom" with a child's voice, addressing the red-clothed woman who was gradually moving away. There were three reasons for this: the first was to clarify the mother-son relationship between the two main characters, the second was to express the fear of John, and the third was that the word "Mama" is the same pronunciation and meaning in both Chinese and English (and many languages), and thus it would have a relatively universal understanding.

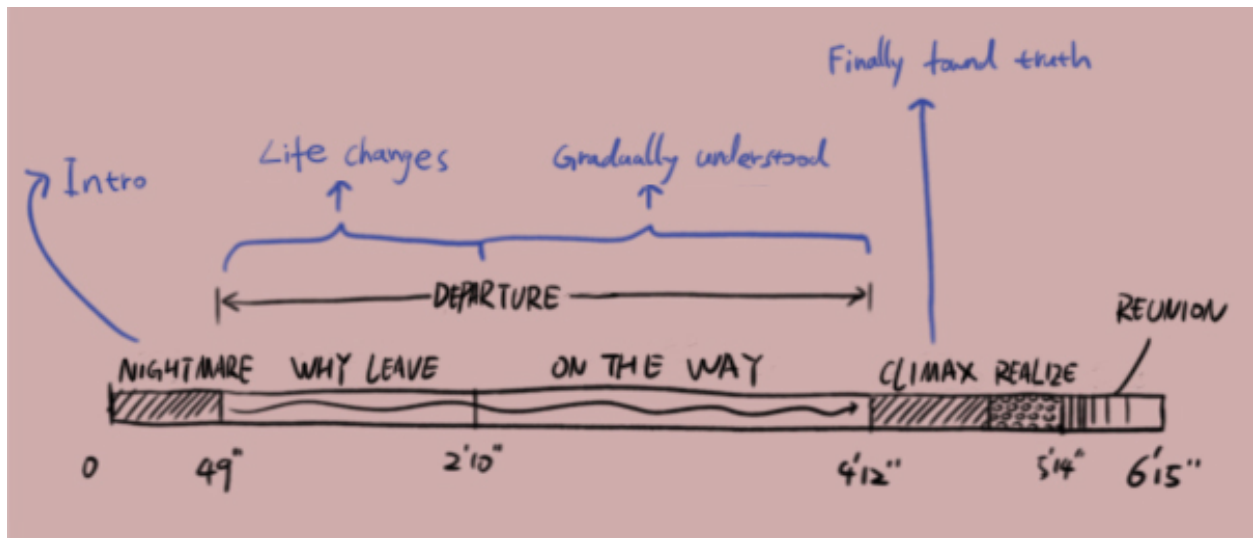


Fig.12 Note for composer

I chose to use only limited sound effects and ambience because of the slow pace of the film which has little dynamic action. Music became a major part of the sound of the film, for its ability to accent the emotions of the scenes. The composer I worked with at that time was Yixin Huang, a graduate student of The Eastman School of Music.

Storyboard and Animatic

The initial idea for Animatic was to contain the whole film duration to about 6 minutes. It is divided into 1 minute for the nightmare scene, 1 minute for the scene of early morning before John's departure, 1 minute of John on various transportation, a one-minute memory of the abusing scene, and a two-minute mother-son reunion scene. Such a framework was to ensure the balance of the story structure, to avoid spending too much time on a certain part. However, it was a challenge as in the next animatic revisions, I basically kept this arrangement of timing.

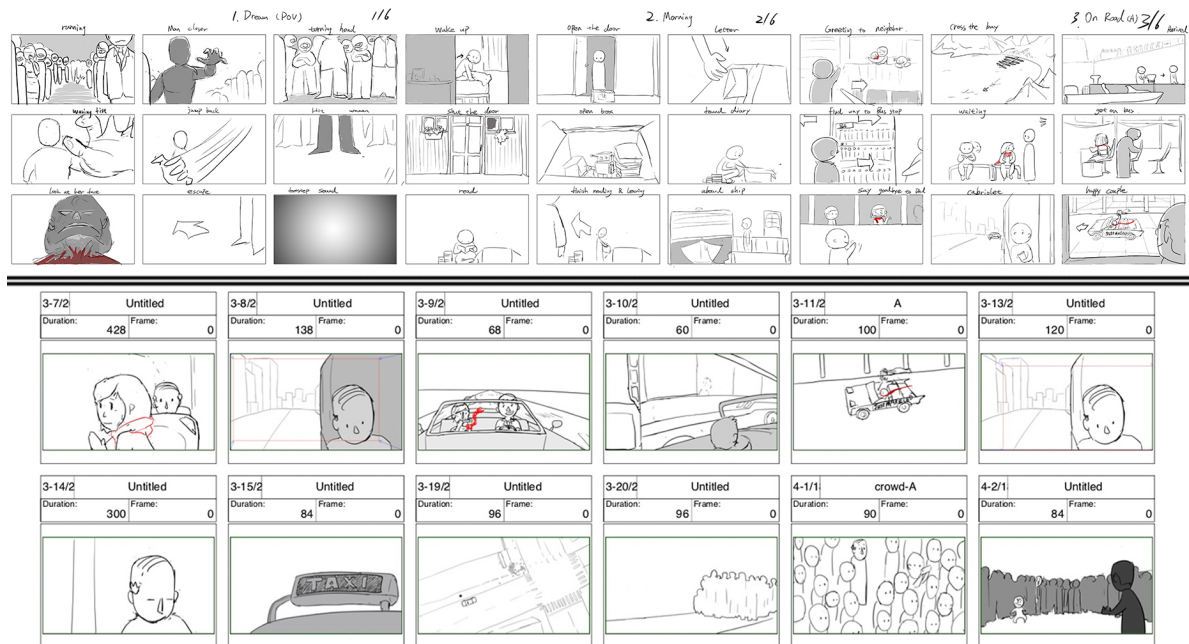


Fig.13 Comparison of early thumbnail(above) and mid-term storyboard(below)

It took me about two weeks to move from the thumbnail boards to the first rough Animatic. When reviewing my storyboard in real time, I could see a lot of problems that I didn't notice before. Specifically there were too many one-point perspective horizontal compositions, and too many "boring walking" shots.

In the thumbnails, there were many camera panning shots that followed John's walking. In most of these shots, John just walks while reading the diary and has no other actions. I thought this would waste a lot of time to animate the meaningless walk cycle animations, so I edited them out of certain sections of my animatic. In addition, in the shots following John's walks, the composition was such that audience tended to miss actions that occur around John, which led to a lot of important information being overlooked. So, I modified the composition and the angle of the cameras of some scenes to give them more depth. The stronger perspective also helped me to distinguish the primary and secondary relationships of the characters in the shots to more

effectively guide the audience's eye line. For example, when the red scarf appeared in the frame, I pushed the reading John to the edge of the frame to visually place the red scarf in the center.

Another issue was that some shots seemed to go on for too long or the character's action was too slow. My advisor helped me a lot with how to improve shot diversity. With her help, I added different camera movements in longer duration shots, such as zoom in/out or rack focus. For some lengthy but very simple shots sequences (such as the shot just showing John going from point A to point B), I used match cuts to replace them to save time on the shots. Also, camera movements within the shot could act as a more effective eye guideline. Sometimes there were multiple shots for a single line in the script, I tried to combine them into one shot to make the sequence more economical.

Lastly, the overall length of the whole film was too long. Because most of this film was slow-paced sequences, some viewers had lost interest in John's consistent walking. To help with the overall pace of the story, I had to delete the scene of the cemetery and the scene of the mother posting a missing person sign on the street. After the climax of the film, when John discovered through the diary that his mother protected him, I accelerated John's pace and for him to quickly reach his mother's apartment. Quickening the pace of the sequences this way also expresses his eagerness to see his mother.

Other minor problems discovered by converting the storyboard into an animatic had also needed to be fixed. For example, I unified the direction in which John walks to avoid breaking the 180 degree rule. In the final version John's walking direction consistently remains from left to right. He also more consistently stays on the left side of the frame in multiple shots while the "red scarf" is mostly on the right side.

Animatic night

My department held the Animatic Night event in the seventh week (10/4-10/11), with the goal to get critiques from SOFA faculty and students before the start of our production phase. I presented my Animatic and wanted to know if the audience followed the gist of the story. In the resulting feedback, there seemed to be a large part of the audience who do not fully understand the events. The main problem was that the viewers couldn't link the "red scarf character" of different ages with John's journey to his mother. I surmised it was probably because they didn't understand that the red scarf characters are actually the projected imagination that occurs in John's mind as he reads the diary. Later in the week, in a meeting with my advisor, she suggested that I highlight the presence of the red diary in the frames. For example, in every shot with the "red scarf" appearing, the audience should notice that John is also reading the diary so that they can more easily link these two visual items together. With this, we hoped that the audience could establish the concept of the red scarf girl as an illusion manifested from the diary.

After combining my mentor's advice with valuable feedback from the audience of Animatic Night, I decided to further stress the importance of the red diary. In the modified animatic, John was reading the diary all day from the time he leaves his house until he finally comes to the climactic realization and understands the truth of his past. Throughout this process, a change was made so that he does not interact with any characters from the diary anymore.

On top of this, I added some details to John's house scene. For example, In the first shot after waking up from his nightmare, I made the first focus in the scene an old blurred family photo in the foreground, implying the dream as being related to his family. Also, when John callously tossed the letter from his mother on the top of shoe cabinet, we see that there is already

a pile of letters there. They are all unopened letters with the same envelope. At this point, we could guess that someone has been trying to contact him for many years, but he has always refused to even acknowledge them.

At this point, the visual development of the story had basically been determined to be completed. Throughout the process, often in order to answer the audience's questions, many additional shots were added and used to explain. But these shots sometimes only exacerbated the audiences misunderstanding. In order to avoid this happening, I reviewed the main theme and story beats of my film. Under the premise of ensuring that everything was centered around the theme, I found ways to answer questions or avoid the confusion of the audience altogether. After the repeated revisions, I entered the production stage.

Production

Production Pipeline

In the production phase, the most frequently used software was TVPaint, a 2D animation program based on hand-drawn animating styles and bitmap technology. Most animation sequences were made in TVPaint, including moving backgrounds. Static layouts and backgrounds were drawn in Photoshop. In line with the animatic's timeline, I made a TVpaint file containing all the clips of film in 1080p resolution for quick browsing. In addition to this, each individual shot was saved as a separate 4K resolution TVPaint file so I could open it and work more efficiently. This multi-level file management system also reduced the risk of file corruption or loss.

The production phase mainly included these general steps in the process: layout, tie down the keyframes, rough inbetweening, inking, final backgrounds, and coloring. Layout drawing and animation keying would be worked simultaneously.

Animating

In the nightmare scene, I used a pure black background with white lines of characters. The animation was done by combining "pose to pose" and "straight ahead" methods. After completing the inking of keyframes, the rest of the parts between the keyframes were drawn frame by frame. This ultimately showed an effect of a line that keeps shaking. This "mushy" style was very reflective with an image of the monster in John's nightmare.

Another interesting style that was tried in the nightmare scene was exaggerated perspective. Since the entire scene was represented by John's point of view, it was deeply based in strong subjective emotions. We saw what John saw and we should feel what he felt, which is strong repression and fear. Thus, I exaggerated the perspective when monsters appear, and made them look taller and more oppressive. When the monster representing the father grabbed John, his face was getting closer to the screen so that the frame distorted similar to a fisheye lens effect.

However, the use of POV shots also brought some challenges. I needed to always pay attention to controlling the height of the camera to avoid the situation in which John in the nightmare was higher than other characters. Another problem was that it is very difficult for me to make a transition by cutting the shots in this scene. When John turns and runs away in fear, I planned to make a fast camera pan with a dynamic blur. In order to make this transition sequence, I had considered for a long time about using After Effect rather than simply hand drawing that transition. Eventually, I decided to insert a few frames of hand-drawn blurred images into the TVPaint to simulate John's quick turning.

In the next scene, we're returned to reality, in John's house on an early morning. This was the audience's first impression of adult John. I hoped that the audience would read him as a middle-aged, grumpy man living in solitude. For this, I added some performance to show these characteristics, such as annoyance at being woken up, and having a lot more locks on the door than normal to emphasize his defensiveness.

He was not intended as a strong middle-aged man with an athletic body, but in the early version, I animated his movements too slowly and his model became too severely hunched. My advisor suggested that I should observe the movement of a man in his 50s in real life, because

John's way of action should be distinguished from his 70-year-old mother, so as to not to let the audience mistakenly think that these characters were the same age. So, I adjusted John's actions to make him look a little lazy and no longer in his prime, but not sickly or elderly.

When John embarked on the way home, he had to travel in multiple vehicles. The most challenging part of this were the shots of him riding the bus. This sequence included the only piece of the whole film which is animated background. The camera was focused on the bus and tracking the bus, so the background elements had to move far away into the distance in accordance while keeping a one-point perspective. My approach to this set of sequences was to make a 36-frame loop as an animated background cycle. Since I made each building on a separate layer and they did not 100% follow the uniform perspective rules, I easily noticed the unnatural combination of the buildings and the pavement when I played the sequence back with both elements. My advisor recommended I use the vanishing point guideline tool in TVPaint to create a perspective rule, then keep all layers sharing this perspective grid. After doing this, the movement of the background building was significantly improved.

Another important feature of this part (John's passage on different transport vehicles) was the appearance of multiple red scarf characters of different ages. In this part, John was always in the frame, and the audience's eyes are used to following him. When a red scarf character enters the frame, the audience often had no time to react to her appearance and this caused the audience to miss her performance. I had to make sure that the audience's eye would move to the red scarf girl in time, and also make sure that the two characters didn't act at the same time. With this in mind, I adjusted the order of the two characters' actions in the timeline, so that when the red scarf girl appeared and performed, I stopped John's actions to make sure the audience wasn't distracted. In addition, I also used camera movement techniques such as zoom in/out or rack

focus to make the focus of the frame gradually point to the red scarf girl. Through these methods, I hoped that the audience could read the performance of the character more clearly without being confused in this part.

The re-visualization of the abusing scene was the climax of the film, and it was also the most dramatic action scene of the film. The young mother with the red scarf acts as a protector in this scene, as she bravely blocked her husband from following the escaping young John. I wanted to make this shot full of heroic atmosphere. For this reason, I pushed the key postures of the characters as much as possible to make them more dynamic in the shots of confrontation. The "Father" character was leaning forward aggressively with a stretched arm in the direction of where John fled, but he finally he backs off in frustration because of the mother's firm pose, as she stretched out her hands in opposition to the father. Her eyes were fixed on her husband while she shook her head firmly and slowly. Here I let her red scarf float in the wind like Superman's red cape. All of these details were specifically placed to convey the message "I will never again allow you hurt my son."

Because Little John was rushing to escape, he did not witness his mother's heroic behavior. My advisor and I organized the sequence of actions in this scene. We organized it to be: the "father" tried to beat little John at first, then little John fled, which caused him to miss his mother as she came forward, and then "mother" blocked the "father" from following John. I needed to make sure that my audience also fully understands the sequence of these actions, so I made the shot of little John and his mother passing by each other into a slow-motion sequence of action. The audience had time to see that they didn't notice each other. Furthermore, this slow-motion shot helped build up the climax shot with greater anticipation.

When I showed this scene to my advisor, she thought that a crowd of people on the street in a circle in this scene seemed somewhat like a schoolyard fight. I agreed with her point. My reason for doing this is that in the reality-timeline in the film, adult John had been blocked by the crowd because he waits for a red light. Moreover, in the illusion from the diary, the "wall" formed by the crowd corresponds to the monsters in the nightmare, and their indifference added to the frustration and fear of little John. So I thought it was necessary to keep these crowds in the background. In order to prevent the audience from having the same doubts as my advisor, I removed detail from the background crowd, and the people next to each other merged into a single-color block, leaving only the outline and limited details. The adjusted crowds were more integrated into the background. I hoped this would help the audience to pay more attention to the actions of the main characters.

Finally, we came to the scene of the mother's apartment. After the climax, the pace of this scene slowed down, and we saw the calm and warm shots of reunion. The camera follows John into his mother's bedroom, and then the mother and son met each other for the first time after being separated for decades. Here, my advisor asked me a question: When they finally met, what kind of mood did they have? This was very important because the answer to this question determined how I should animate the character's performances. In the early version of my keyed animation, John just walked into the bedroom with neutral facial expressions. He was greeted by his mother's warm smile and the whole scene ended with them smiling at each other. To be honest, this was quite a boring sequence. After discussing with my advisor, we realized that John should be ashamed of himself, because he had misunderstood his mother for so many years and stubbornly refused to communicate with her. He wants his mother's forgiveness, even though he doesn't know if his mother is willing after all this time. This series of complex emotions should

be reflected in his actions: for example, he should be shy and afraid to have eye contact with his mother and be relieved and relaxed when he realizes he is forgiven by his mother.

On the other side, the mother should be surprised by the arrival of John at first and needed time to understand this fact. When she finally confirms to him that he was the one she wanted to see most, her expression resembles the good old days as a mother with kindness in her eyes. It's was also important to note that she is both very elderly and suffering from a serious illness and her performance should be different from that of healthy people.

Inbetweening

After completing the keyframes for most of my shots, I started the process of drawing in-between frames. In the process I found two problems: one was from the workflow in the way I drew the frames. The way I was used to was to draw the first inbetween (e.g. frame#5) from the strict middle position of two keyframes (e.g. Frame#1 and #9). Next I would insert new inbetweening frames (e.g. frame #3 and #7) in the middle of those. When I filled all the frames (animated on twos) between two keyframes in this way, the original, dynamic movement tended to look slow and average. The intuitive feeling it gave was as if the action is very “mushy”. I thought the reason for this problem was because every time I drew the inbetweening frame, I used the light table function to reference two frames before and after, making all the in-betweens exactly even in distance. In order to keep the dynamic timing of actions, I needed to make use of animation timing charts, which was something I had little experience in. I spent some time learning and using the timing chart to modify my inbetweening process. Fortunately, the results are much more satisfying.

There was another problem that caused me to have to redraw keyframes. When the character's key pose was too conservative or too "tight", filling of the middle frames between them became very challenging, and often the result is the action became too "mushy" or was too subtle to notice. I needed to make the key poses more exaggerated in order to give more space to the inbetweening, or re-evaluate and modify the duration of the action to make them clearer.

Inking

In the beginning, I specified the pen brush size for inking as 2.0 in TVPaint. The problem with this was that when I need to zoom in for some shots for compositing, the character's outline would be magnified and a jagged, pixelated edge appeared. Another situation was that if the 2.0-sized line was applied to a close-up shot or to foreground characters, the character's outline seemed too thin. Therefore, I had to break the rules I had previously and chose different sizes of outlines for the different proportions of the characters in the final picture.

Some classmates suggested that I could use the 3-point spline tools for inking in TVPaint. Because this tool could quickly create a smooth curve. But I ended up insisting on hand drawing every frame, because I preferred the texture of traditional animation with a slight jitter every frame.

Another thing noted in the inking phase was that sometimes I needed to split my inking layer into different layers. It depended on whether there was an overlap between different parts. By separating them in advance, I could save working time in the coloring phase, and it was convenient for me to import the PNG sequence in the post-production stage.

Coloring

I mainly used the “color and texture layer” tool in TVPaint pro to do the coloring. By creating a “Colors and Textures Generator”(or “CTG”) layer for the Inking layer, the program could automatically fill all the colors and even ignore the unclosed lines. This greatly sped up my coloring process. Although it took a lot of time to render when the CTG layer had too many frames, it was still worth using.

My working environment consists of two screens: One was Wacom Cintiq for digital drawing, another was a monitor from NEC. There were color differences between these two screens, so when I used Cintiq to fill the color, while that I was satisfied with the color on that screen, once it is moved to the NEC monitor, it became more saturated or even a bit dazzling. So I had to pre-adjust my color palette on a monitor with the correct color, and stick to these colors in the palette for the following coloring work.

Post Production

Post Production Pipeline

After completing the Inking and Coloring in TVPaint, I exported each animation layer separately as PNG sequences. I then imported the PNG sequences into After Effects to add effects and to composite the shots. Each shot would be rendered as a separate .mov file. At the same time, background music and sound effects would be adjusted and assembled through Pro Tools. The final video compositing was be done in Adobe Premiere. This was done to try to maintain the high quality of the final video, and avoid the rendering quality being repeatedly compressed multiple times in different software.

Sound and music

I organized my general ideas of the music structure into a note and sent it to my composer, Yixin Huang. Yixin comes from the Eastman School of Music. I met him through a recommendation from one of my classmates and this was our first collaboration. In addition to the important musical structure, I hoped to keep an open mind about the composer's ideas.

After a few weeks of receiving my notes, Yixin sent me his first version of music. This was a bittersweet version for me. I was appreciative for how he left silence in the nightmare and the morning of John's house scene, so that the film could start with some neutrality. The music begins once John gets on his boat and leaves home. This was in line with my expectation at the beginning of the film. That is, the two scenes at the beginning set suspense and ambiguity for the

audience, at this time the audience doesn't know what kind of person John is and doesn't know his past. The audience would spend a lot of time reading the visual information set in frame at this time. So I thought it's would be best to mute the background music during these scenes. When John sat on his boat and headed across the strait, the music range, indicating that his journey, physically and emotionally, had begun.

The problems appeared in the climax scene of the whole film. The most important climax in the plot was when John discovered the truth of his childhood abuse through the diary. After that, his thoughts have undergone a huge transformation. Obviously, my composer thought the climax part was in the last scene, when John arrives at his mother's apartment. My advisor and I both agreed that that version of music didn't match my climax scene. So I reorganized the comments into my Animatic as subtitles and pointed out that the most important part that needs to be modified was to identify the climax of the film.

Unfortunately, until the last night before the screening signup deadline, my composer still did not send me the revised version based on my notes. Because of this breach of our collaboration, I had to terminate the cooperation with him. After this, I had no choice but to use the B-cut version of my film, which was my previous option as a backup. The final version of the music I used came from the copyright-free music library provided by RIT School of Film and Animation. I must admit that this unexpected change of plan gave me a very valuable lesson. But I believe that it was the right choice to terminate my partnership in this case with an unprofessional collaborator.

Compositing

I used After Effect to do most of the shots' camera movement, visual effects, and compositing. The reason for not using the camera tool or multi-plane camera effect in TVPaint was that any tiny changes would take a lot of rendering time, and might cause alterations that I couldn't redo when rendering was completed. In contrast, I was more familiar with the basic tools of After Effects. The only disadvantage was that this is an extra step, which might result in impaired image quality. Therefore, I chose to export from TVPaint in the format of a lossless PNG sequence. So every frame would be rendered with highest quality.

Production Extension

According to the planned schedule from my proposal, I should have been finished my film in May 2019, and participated in the screening at the end of the spring semester. However, because I was behind schedule in the production stage, I did not enter the post-production stage as scheduled in April. In order to catch up with the deadline, I re-established an agenda in early April and making a B-cut of the film became the top priority at that time. I deleted the first nightmare scene that I almost didn't start making at the time. Other parts were also difficult to achieve while shooting for a frame rate of animating on twos. Most importantly, I felt losing the first scene damaged the integrity of this film. Finally, before the deadline for the May screening, I expressed my concern to my advisor that I might not be able to finish the movie as scheduled. I was very appreciative to her for supporting my decision to defer to the next semester. After this, I decided to enroll for one more credit and use the time over the summer vacation to continue to complete my film, with the release date is set in December 2019 at the end of the fall semester.

When I reviewed my whole process, I think the reason why the film production got behind schedule was because I had inexperienced expectations of possible problems. Sometimes a shot had to undergo many weeks of modification in addition to the processes completed in the plan. Modifications to a shot also involved many related shots that needed to be fixed. Over time, it slowed down my progress and accumulated to much lost time. Through these failed experiences, I learned a lot of time management methods, I believe it will help me in my future career.

Final Thoughts

After deciding to be an animator, I had been educated on animation at school for many years. This thesis film production process, which lasted for a whole year, was an opportunity for me to show all the storytelling techniques and animation skills I have learned. In most of my previous works, I relied more on experience and enthusiasm for animation, as well as imitation of the excellent film language of others. Through these years' systematic animation studies, I had a deeper grasp of animation tools and storytelling techniques. Although I still need a lot of practice, compared to a year ago, I am now a step closer to my goal of becoming an effective storyteller.

In addition to animation skills, this was a long-lasting and completely independent production process. Therefore, time management used to become a huge problem for me. In the first few weeks, I could keep up with my schedule. This made me optimistic about future progress. However, in the following weeks, I did not only have to begin the new tasks, but also

still needed to fix the problems leftover from the previous week. Over time, I gradually lagged behind my schedule. In the weeks leading up to the end of the semester, I had to rearrange my to-do list to complete the film on time. This series of problems reflects my lack of experience in production management. Fortunately, my advisor Professor Blanchard gave me a lot of help. At the beginning of each semester, I wrote my weekly plans on the index cards then pinned them on the wall of her office. During the weekly meeting with her, we evaluated together whether the week was completed as I planned. This was very helpful for me to keep me on the correct track. I have no doubt that this method helped and will be applied to my subsequent creations.

My most important thought about this film is that for this production, the subject matter is very close to me personally. During my thesis production process, unlike the reunion ending, my grandmother sadly died of cancer. But I am very fortunate that I started this production when she was alive. This film honestly represents what I would have liked to say to her. In my research for this film, I conducted several interviews with my mother and grandmother. These were my first few opportunities to have a face-to-face conversation with my elder family members. The selfless support they gave me also brought us closer in our relationship. I think this is the most valuable gift I have gained through this film on a realistic level.

The completion of this film will not be the end of my animation creation as a visual storyteller. The experience I gained from this process has been invaluable to my education and to my work in my future career.

Appendix

Original Proposal

Mother's way

(working Title)

2D Animation

Chaofan Li

Thesis Proposal

For MFA in Film and Animation

School of Film and Animation

Rochester Institute of Technology, Rochester, New York

March, 2018

Approved for Submission by:

Mari Jaye Blanchard, Thesis Chair

Logline:

An old man who has been estranged from his family for decades finally embarks on a visit to his dying mother, and the events on his journey seem to be more than mere coincidences.

Treatment:

A man with an angry face is standing in front of a boy, a waving fist. He is approaching the boy step by step. The boy looks around in fear, and he sees a woman approaching. The boy turns and flees, and only his footsteps were heard in the empty space.

The sound of knocking on the door come from outside. John, a single old man, received a large package and a letter one morning. After he finished reading the letter, he found that the box was filled with old toys, old books, and lot of old belongings. Among them, a diary catches his attention and he begins to read it. Then he packs his luggage, puts on his hat, and, bringing the letter and diary, he departs from his house.

Outside, he greets his neighbors. His neighbors are a family of five: the father, the mother holding the youngest daughter, and eldest daughter (wearing a red scarf) holding her younger sister by hand. John paddles his boat to another pier of opposite island. There is only a narrow channel between the island he lives on and the mainland. Then he boards a bus.

On the bus, a girl (wearing a red scarf) sitting in front of John is leaving home to go to college. When the bus begins to move, she waves goodbye to her father on the bus station.

John sits in his seat looking out the window. A cabriolet passes by the bus. Sitting in the car is a newly-wed couple, the car is spray-painted with the words "just married". Proud and happy bride blows the harmonica to play a cheerful melody. Her scarf is tied on the groom's neck. John smiles and watches as they pass, as he takes off his hat padding over the window to take a nap. His hair is thicker now.

The bus is about to arrive. He wakes up and heads for the back door. He walks much more easily now. Sitting next to the back door is a mother holding a baby. She wrapped her baby in a red scarf. The mother lovingly looks at her baby. The baby's father is grimacing next to her to make baby laugh.

He gets off and continues toward the destination. He stops at the traffic lights with a large crowd. There are three people in the crowd. The Father angrily threatens to hit his son, but the mother steps in between them with a strong, brave expression. Her red scarf flutters in the wind, making her silhouette look like a heroine with a cape. The crowd passes around them, but no one is willing to help. John is blocked by the crowd, and can only watch at a distance, but he is concerned for them.

In the crowd, the father becomes conscious of the others and nervously put down his fist. The boy bolts out of the crowd and crashes into John during his escape, but he doesn't stop. Due to his escape, the boy didn't see the scene in which his mother heroically protected him. John tries to reach out and stop the boy, but he is already running away. The green light of the crosswalk turns on, and John had to cross the intersection with the crowd.

Now John has the appearance of a healthy young man. the wall he passes through was plastered with flyers and missing-persons notices looking for a boy running away from home. There are more and more missing-persons notices until John passes the woman who is posting them. This woman looks haggard.

John passes a cemetery. There was a funeral going on, and an old widow in black bids farewell to her second husband. John started to sweat, so he takes off his jacket and hangs it over his arm; he looks even younger now.

Finally, he has arrived. He pushes open the door of his mother's apartment. His bedridden mother sees his arrival and smiles to him. After getting up, the mother puts on a faded red scarf that was covering knees. Now, John looks exactly like his 15 year old self. His mother goes to the kitchen to boil water for him. As she passes the table, she lights a candle in front of a photo portrait of his father.

John looks at his mother's silhouette in the kitchen and then at the nightstand. The harmonica was there on the nightstand; the same one which he had thrown away when he left home, and also the one that accompanied his mother for many years. He picked up the harmonica, put it on his mouth and took a deep breath.

He played a somber, beautiful melody for his mother: the song "Song Bie" ("Say goodbye").

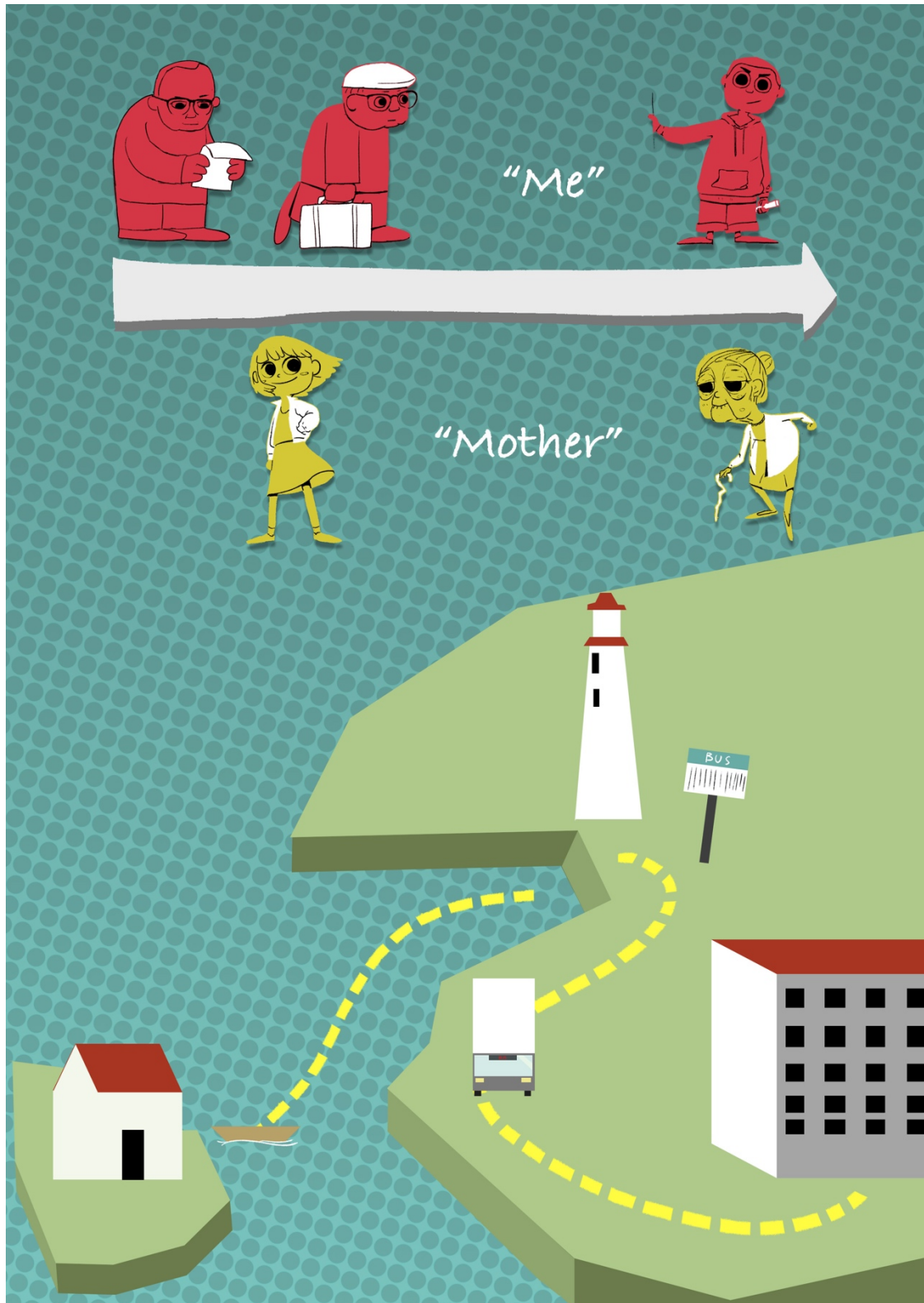
Rationale:

My parents divorced when I was 9 years old, and I lived with my mother for the next 15 years. For me, my mother should be the closest person in my life, but at the same time I also found that I am not familiar with her role in society. Many parents try their best to provide their children with a safe and happy environment for growth. They will not talk too much with their children about their work or share their views on social events. Especially in China. My mother is a strong independent woman. She seldom shows negative emotions in front of me. No matter how many difficult things are going on in our life, she always bears them on her own.

A similar situation happened between my grandma and me. In my opinion, she has always been a kind, but somewhat chatty old lady. I never thought of understanding her more until she showed me the diary she had written from the late 1930s. I suddenly realized that she had experienced almost the most turbulent period in Chinese history: World War II, the KMT-CPC Civil War, great famine in 60s and Cultural revolution. Through this diary, I have deeper feelings for my grandma

In my thesis film story, I blended the story of my mother and my grandmother together. All the plots in the story have happened to me or to my mother. During his trip, the protagonist learned more about his mother through the diary. His deep memory of his mother was awakened.

Visual Guidelines:



Budget:

Categories/Items	Cost
TVP Paint Pro Educational Licenses	\$620
Compost Music	\$300
Festival Fee	\$300
Website Fee	\$100
Total	\$1320

Time line

		2018-FALL																			
		20-Aug	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	8-Oct	15-Oct	22-Oct	29-Oct	5-Nov	12-Nov	19-Nov	26-Nov	3-Dec	10-Dec	17-Dec	24-Dec	
Development	Complete story																				
	Model sheets																				
	Concept Designs																				
Pre-production	Stotyboard																				
	Color Script																				
	Animatic																				
	Shot list																				
	Key (rough)																				
Production	Inbetweens(rough)																				
	Background																				
	Pencil Test																				
	Inking																				
	Coloring																				
Post production	Composite																				
	Effects																				
	Render																				
Sound Design	Finding Composer																				
	Music(rough)																				
	Music(Final)																				
	SFX																				
	Mixing																				

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[1] Unkrich, Lee. "Introduction." *The Art of Coco*. Chronicle Books, 2017, p. 4.